Reg. No. : | | | | | | | | | | |

Question Paper Code: 41447

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Fourth Semester

Computer Science and Engineering

14UEC423 - MICROPROCESSORS AND MICROCONTROLLERS

(Common to Information Technology)

(Regulation 2014)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. *SUB B* instruction in 8085 microprocessor

   (a) resets the carry and sign flag
   (b) sets the zero and parity flag
   (c) sets the zero and carry flag
   (d) can modify all flags according to result

2. Vector address of interrupt RST 7.5 is

   (a) 0.002CH (b) 0.002CH (c) 0.003CH (d) none of these

3. In 8086 each segment register contains _____Kbytes of memory.

   (a) 8 (b) 16 (c)32 (d) 64

4. Which of the following instruction is a logical instruction?

   (a) DIV AB (b) TEST (c) CALL (d) AAM

5. The 8087 coprocessor operate in _____with an 8086 processor and with the same instruction_____

   (a) series, byte (b) parallel, byte
   (c) series, bits (d) parallel, bits

6. The synchronization between processor and coprocessor can be done by _____ connection and the _____ instruction.

(a) RQ/GT_0 and RQ/GT_1, FWAIT (b) INT and NMI, WAIT
(c) BUSY and TEST, FWAIT (d) S_0 and QS_0, WAIT

7. How many address lines are required to access 1 MB RAM using microprocessor?

(a) 16 (b) 8 (c) 20 (d) 12

8. The 8279 is a

(a) DMA controller (b) programmable keyboard display interface
(c) counter (d) interrupt controller

9. Which of the following registers can be used as two individual 8-bit registers?

(a) DPTR (b) PC (c) SBUF (d) PSW

10. What will be the output after execution of the following instruction?

MOV A, #55
ANL A, #67

(a) 54 (b) 45 (c) 55 (d) 67

PART - B (5 x 2 = 10 Marks)

11. Classify the signals of 8085.

12. List the various segment registers in 8086.

13. Compare closely coupled and loosely coupled configurations of co-processor.

14. Outline the importance of DMA.

15. Draw the format of PSW of 8051.

PART - C (5 x 16 = 80 Marks)

16. (a) Draw and explain the architecture of 8085 microprocessor. (16)

Or

(b) Explain the instruction set of 8085 in detail. (16)

17. (a) Explain the addressing modes of 8086 with examples. (16)

Or

(b) Explain in detail about Interrupt Service Routine (ISR) of 8086 processor. (16)

18. (a) Draw the architecture of 8087 numeric data processor and explain each block. (16)

Or

(b) List the various types of coprocessor configurations? Explain them in detail. (16)

19. (a) Show the function of keyboard and display controller with a neat sketch. (16)

Or

(b) Describe the block diagram of IC 8237 DMA controller. (16)

20. (a) Show the block diagram of 8051 microcontroller and explain the functions in detail. (16)

Or

(b) Explain the interfacing of ADC and DAC with 8051 microcontroller. (16)

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